

AATGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCTTAAGTAACGCCAT  
 TTTGCAAGGCATGGAAAAATACATAACTGAGAATAGAAAAGTTCAGATCA  
 AGGTCAGGAACAGATGGAAACAGCTGAATATGGGCCAAAGCGGATATCTGT  
 GGTAAGCAGTTCCTGCCCCGGCTCAGGGCCAAGAACAGATGGAACAGCTG  
 AATATGGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTGCCCCGGCTCA  
 GGGCCAAGAACAGATGGTCCCCAGATGCGGTCCAGCCCTCAGCAGTTTCT  
 AGAGAACCATCAGATGTTTCCAGGGTGCCCCAAGGACCTGAAATGACCCT  
 GTGCCTTATTTGAACTAACCAATCAGTTCGCTTCTCGCTTCTGTTTCGCGC  
 GCTTCTGCTCCCCGAGCTCAATAAAAGAGCCCACAACCCCTCACTCGGGG  
 CGCCAGTCCTCCGATTGACTGAGTCGCCCGGGTACCCGTGTATCCAATAA  
 ACCCTCTTGCAGTTGCATCCGACTTGTGGTCTCGCTGTTCTTGGGAGGG  
 TCTCCTCTGAGTGATTGACTACCCGTCAGCGGGGGTCTTTCATTGTTGGGG  
 CTCGTCCGGGATCGGGAGACCCCTGCCCAGGGACCACCGACCCACCACCG  
 GGAGGTAAGCTGGCCAGCAACTTATCTGTGTCTGTCCGATTGTCTAGTGT  
 CTATGACTGATTTTATGCGCCTGCGTCGGTACTAGTTAGCTAACTAGCTC  
 TGTATCTGGCGGACCCGTGGTGGAACTGACGAGTTCGGAACACCCGGCCG  
 CAACCCTGGGAGACGTCCAGGTGCGGGGGCCGTTTTTGTGGCCCGACCTG  
 AGTCCAAAAATCCCGATCGTTTTTGGACTCTTTGGTGCACCCCCCTTAGAG  
 GAGGGATATGTGGTTCTGGTAGGAGACGAGAACCTAAACAGTTCCTCGCC  
 TCCGTCTGAATTTTTGCTTTCGGTTTGGGACCGAAGCCGCGCCGCGCGTC  
 TTGTCTGCTGCAGCATCGTTCTGTGTTGTCTCTGTCTGACTGTGTTTCTG  
 TATTTGTCTGAAAATATGGGCCCGGGCCAGACTGTTACCACTCCCTTAAG  
 TTTGACCTTAGGTCACCTGGAAAGATGTCGAGCGGATCGCTCACAACCACT  
 CGGTAGATGTCAAGAAGAGACGTTGGGTTACCTTCTGCTCTGCAGAATGG  
 CCAACCTTTAACGTCGGATGGCCGCGAGACGGCACCTTTAACCGAGACCT  
 CATCACCCAGGTAAAGATCAAGGTCTTTTACCTGGCCCGCATGGACACC  
 CAGACCAGGTCCCCTACATCGTGACCTGGGAAGCCTTGGCTTTTGACCCC  
 CCTCCCTGGGTCAAGCCCTTTGTACACCCTAAGCCTCCGCCTCCTCTTCC  
 TCCATCCGCCCCGTCTCTCCCCCTTGAACCTCCTCGTTTCGACCCCGCCTC  
 GATCCTCCCTTTATCCAGCCCTCACTCCTTCTCTAGGCGCCCCCATATGG  
 CCATATGAGATCTTATATGGGGCACCCCCGCCCTTGTAACCTTCCCTGA  
 CCCTGACATGACAAGAGTTACTAACAGCCCCTCTCTCCAAGCTCACTTAC  
 AGGCTCTCTACTTAGTCCAGCACGAAGTCTGGAGACCTCTGGCGGCAGCC  
 TACCAAGAACAACCTGGACCGACCGGTGGTACCTCACCTTACCGAGTCGG  
 CGACACAGTGTGGGTCCGCCGACACCAGACTAAGAACCTAGAACCTCGCT  
 GGAAAGGACCTTACACAGTCCTGCTGACCACCCCAACCGCCCTCAAAGTA  
 GACGGCATCGCAGCTTGGATACACGCCGCCACGTGAAGGCTGCCGACCC  
 CGGGGGTGGACCATCCTCTAGACTGCCGGATCCCAGTGTGGTGGTAGGGA  
 ATTCAAGCTTGATCTCTATAATCTCGCGCAACCTATTTTCCCCTCGAACA  
 CTTTTTAAGCCGTAGATAAACAGGCTGGGACACTTCACATGAGCGAAAAA  
 TACATCGTCACCTGGGACATGTTGACAGATCCATGCACGTAAACTCGCAA  
 GCCGACTGATGCCTTCTGAACAATGGAAAGGCATTATTGCCGTAAGCCGT  
 GGCGGTCTGGTACCGGTGGGTGAAGACCAGAAACAGCACCTCGATCTGAG  
 CCGCGATATTGCCAGCGTTTCAACGCGCTGTATGGCGAGATCGATCCCG  
 TCGTTTTACAACGTCGTGACTGGGAAAACCCTGGCGTTACCCAACCTAAT  
 GGCCTTGGAGGACATCCCCCTTTCGCCAGCTGGCGTAATAGCGAAGAGGC

Figure 1

CCGCACCGATCGCCCTTCCCAACAGTTGCGCAGCCTGAATTGGCGAATGG  
CGCTTTGCCTGGTTTCCGGCACCAGAAGCGGTGCCGGAAGCTGGCTGGA  
GTGCGATCTTCCTGAGGCCGATACTGTCGTCGTCCTCAAACCTGGCAGA  
TGCACGGTTACGATGCGCCCATCTACACCAACGTGACCTATCCCATTACG  
GTCAATCCGCCGTTTGTTCACGGAGAATCCGACGGGTTGTTACTCGCT  
CACATTTTAATGTTGATGAAAGCTGGCTACAGGAAGGCCAGACGCGAATT  
ATTTTGTATGGCGTTAACTCGGCGTTTCATCTGTGGTGCAACGGGCGCTG  
GGTCGGTTACGGGCAAGACAGTCGTTTGGCGTCTTAATTTGAGCTCGAGC  
GCATATCTACGCGCCGGAGAAAACCGCCTCGCGGTGATGGTGCTGCGCTG  
GAGTGACGGGAGTTATCTTGAAGATCAAGATATGTGGCGGATGAGCGGGA  
TTCCGAGCGAAAACGGTCTGCGCTGCGGGACGCGCGAATTGAATTATGGC  
CCACACCAGAGTGGGCGCGGCGACTTCCAGTTCAACATCAGCCGCTACAG  
TCAACAGCAACTGATGGAAACCAGCCATCGCCATCTGCTGCACGCGGAAG  
AACCGACATGGCTGTTATACGACGGTTTCCATATGGGGATTGGTGGCGAC  
GACTCCTGGAGCCCGTCAGTATCGGCGGAATTCCAGCTGAGCGCCGGTCTG  
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CATGTCTGCCCGTATTTTCGCGTAAGGAAATCCATTATGTACTATTTAAAC  
TCGAGCGGCCCGCCAGCACAGTGGTCGACGATAAAATAAAAGATTTTATTT  
AGTCTCCAGAAAAAGGGGGGAATGAAAGACCCACCTGTAGGTTTGGCAA  
GCTAGCTTAAGTAACGCCATTTTGAAGGCATGGAAAAATACATAACTGA  
GAATAGAGAAGTTCAGATCAAGGTCAGGAACAGATGGAACAGCTGAATAT  
GGGCCAAACAGGATATCTGTGGTAAGCAGTTCCTGCCCCGGCTCAGGGCC  
AAGAACAGATGGAACAGCTGAATATGGGCCAAACAGGATATCTGTGGTAA  
GCAGTTCCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCGG  
TCCAGCCCTCAGCAGTTTCTAGAGAACCATCAGATGTTTCCAGGGTGCCC  
CAAGGACCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTCG  
CTTCTCGCTTCTGTTGCGCGCTTCTGCTCCCCGAGCTCAATAAAAGAGC  
CCACAACCCCTCACTCGGGGCGCCAGTCTCCGATTGACTGAGTCGCCCCG  
GGTACCCGTGTATCCAATAAACCCCTCTTGCAGTTGCATCCGACTTGTGGT  
CTCGCTGTTTCTTGGGAGGGTCTCCTCTGAGTGATTGACTACCCGTCAGC  
GGGGGTCTTTTATTCTGCATTAATGAATCGGCCAACGCGCGGGGAGAGGC  
GGTTTGCGTATTGGGCGCTCTTCCGCTTCTCTGCTCACTGACTCGCTGCG  
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TACGGTTATCCACAGAATCAGGGGATAACGCAGGAAAGAACATGTGAGCA  
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TTTCCATAGGCTCCGCCCCCTGACGAGCATCACAAAAATCGACGCTCAA  
GTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCCC  
CCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGG  
ATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGCGCTTTTCTCATAGCT  
CACGCTGTAGGTATCTCAGTTCGGTGTAGGTCGTTGCTCCAAGCTGGGC  
TGTGTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAA  
CTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAG  
CAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACA  
GAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATT  
TGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTA  
GCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTGT

Figure 1

TGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTT  
 GATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACACGTTAAG  
 GGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTG  
 CGGCCGGCCGCAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGAC  
 AGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATT  
 TCGTTCATCCATAGTTGCCTGACTCCCCGTCGTGTAGATAACTACGATAC  
 GGGAGGGCTTACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCA  
 CGCTCACCGGCTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGC  
 CGAGCGCAGAAGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTA  
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 TATGGCTTCATTACGCTCCGGTTCCTAACGATCAAGGCGAGTTACATGAT  
 CCCCCATGTTGTGCAAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTT  
 GTCAGAAGTAAGTTGGCCGCAGTGTTATCACTCATGGTTATGGCAGCACT  
 GCATAATTCTCTTACTGTTCATGCCATCCGTAAGATGCTTTTCTGTGACTG  
 GTGAGTACTCAACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGT  
 TGCTCTTGCCCGGCGTCAACACGGGATAATACCGCGCCACATAGCAGAAC  
 TTAAAAGTGCTCATCATTGGAAAACGTTCTTCGGGGCGAAAACCTCTCAA  
 GGATCTTACCGCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCC  
 AACTGATCTTCAGCATCTTTTACTTTTACCAGCGTTTCTGGGTGAGCAA  
 AACAGGAAGGCAAAATGCCGCAAAAAAGGGAATAAGGGCGACACGGAAAT  
 GTTGAATACTCATACTCTTCCTTTTTCAATATTATTGAAGCATTATCAG  
 GGTTATTGTCTCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAA  
 ACAAATAGGGGTTCGCGCACATTTCTGTCAT

Figure 1

AATGAAAGACCCACCTGTAGGTTTGGCAAGCTAGCGCGGCCGCATAACT  
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TTAAGTAACGCCATTTTGAAGGCATGGAAAAATACATAACTGAGAATAG  
AGAAGTTCAGATCAAGGTCAGGAACAGATGGAACAGCTGAATATGGGCCA  
AACAGGATATCTGTGGTAAGCAGTTCCTGCCCCGGCTCAGGGCCAAGAAC  
AGATGGAACAGCTGAATATGGGCCAAACAGGATATCTGTGGTAAGCAGTT  
CCTGCCCCGGCTCAGGGCCAAGAACAGATGGTCCCCAGATGCGGTCCAGC  
CCTCAGCAGTTTCTAGAGAACCATCAGATGTTTCCAGGGTGCCCCAAGGA  
CCTGAAATGACCCTGTGCCTTATTTGAACTAACCAATCAGTTCGCTTCTC  
GCTTCTGTTCGCGCGCTTCTGCTCCCCGAGCTCAATAAAAGAGCCCACAA  
CCCCTCACTCGGGGCGCCAGTCCCTCCGATTGACTGAGTCGCCCCGGGTACC  
CGTGTATCCAATAAACCTCTTGACAGTTGCATCCGACTTGTGGTCTCGCT  
GTTCCCTTGGGAGGGTCTCCTCTGAGTGATTGACTACCCGTCAGCGGGGGT  
CTTTCAATTTGGGGGCTCGTCCGGGATCGGGAGACCCCTGCCAGGGACCA  
CCGACCCACCACCGGGAGGTAAGCTGGCCAGCAACTTATCTGTGTCTGTC  
CGATTGTCTAGTGTCTATGACTGATTTTATGCGCCTGCGTCGGTACTAGT  
TAGCTAACTAGCTCTGTATCTGGCGGACCCGTGGTGGAAGTACGAGTTC  
GGAACACCCGGCCGCAACCCTGGGAGACGTCCCAGGGACTTCGGGGGCGG  
TTTTTGTGGCCCGACCTGAGTCCAAAAAATCCCGATCGTTTTGGACTCTT  
TGGTGCACCCCCCTTAGAGGAGGGATATGTGGTTCTGGTAGGAGACGAGA  
ACCTAAAACAGTTCCCGCCTCCGTCTGAATTTTTGCTTTCGGTTTGGGAC  
CGAAGCCGCGCCGCGCGTCTTGTCTGCTGCAGCATCGTTCTGTGTTGTCT  
CTGTCTGACTGTGTTTCTGTATTTGTCTGAAAATAAGGGCCCCGGGCCAGA  
CTGTTACCACTCCCTTAAGTTTGACCTTAGGTCACTGGAAAGATGTGAG  
CGGATCGCTCACAACCAGTCGGTAGATGTCAAGAAGAGACGTTGGGTAC  
CTTCTGCTCTGCAGAATGGCCAACCTTTAACGTCCGATGGCCGCGAGACG  
GCACCTTTAACCGAGACCTCATACCCAGGTAAAGATCAAGGTCTTTTCA  
CCTGGCCCGCATGGACACCCAGACCAGGTCCCCTACATCGTGACCTGGGA  
AGCCTTGGCTTTTGACCCCCCTCCCTGGGTCAAGCCCTTTGTACACCCTA  
AGCCTCCGCCTCCTCTTCCCTCCATCCGCCCCGTCTCTCCCCCTTGAACCT  
CCTCGTTCGACCCCGCCTCGATCCTCCCTTTATCCAGCCCTCACTCCTTC  
TCTAGGCGCCCCCATATGGCCATATGAGATCTTATATGGGGCACCCCCGC  
CCCTTGTAAGCTTCCCTGACCCTGACAAGACAAGAGTTACTAACAGCCCC  
TCTCTCCAAGCTCACTTACAGGCTCTCTACTTAGTCCAGCACGAAGTCTG  
GAGACCTCTGGCGGCAGCCTACCAAGAACAAGTGGACCGACCGGTGGTAC  
CTCACCTTACCGAGTCGGCGACACAGTGTGGGTCCGCCGACACCAGACT  
AAGAACCTAGAACCTCGCTGGAAAGGACCTTACACAGTCCTGCTGACCAC  
CCCCACCGCCCTCAAAGTAGACGGCATCGCAGCTTGGATACACGCCGCCC  
ACGTGAAGGCTGCCGACCCCGGGGGTGGACCATCCTCTAGACTGCCGGAT  
CCCAGTGTGGTGGTAGGGAATTCTTAATTAACGCCACCATGGTGAGCAAG  
GGCGAGGAGCTGTTACCGGGGTGGTGCCCATCCTGGTTCGAGCTGGACGG  
CGACGTAAACGGCCACAAGTTCAGCGTGTCTGGCGAGGGCGAGGGCGATG  
CCACCTACGGCAAGCTGACCCTGAAGTTCATCTGCACCACCGGCAAGCTG  
CCCGTGCCCTGGCCACCCTCGTGACCACCCTGACCTACGGCGTGCAAGTG  
CTTCAGCCGCTACCCCGACCACATGAAGCAGCACGACTTCTTCAAGTCCG  
CCATGCCCCGAAGGCTACGTCCAGGAGCGCACCATCTTCTTCAAGGACGAC

Figure 2

GGCAACTACAAGACCCGCGCCGAGGTGAAGTTCGAGGGCGACACCCTGGT  
GAACCGCATCGAGCTGAAGGGCATCGACTTCAAGGAGGACGGCAACATCC  
TGGGGCACAAGCTGGAGTACAACAGCCACAACGTCTATATCATG  
GCCGACAAGCAGAAGAACGGCATCAAGGCGAACTTCAAGATCCGCCACAA  
CATCGAGGACGGCAGCGTGCAGCTCGCCGACCACTACCAGCAGAACACCC  
CCATCGGCGACGGCCCCGTGCTGCTGCCCCGACAACCACTACCTGAGCACC  
CAGTCCGCCCTGAGCAAAGACCCCAACGAGAAGCGCGATCACATGGTCCT  
GCTGGAGTTCGTGACCGCCGCGGGGATCACTCTCGGCATGGACGAGCTGT  
ACAAGTAATGAATTAATTAAGAATTCCAGCTGAGCGCCGGTCGCTACCAT  
TACCAGTTGGTCTGGTGTCAAAAATAATAAACCAGGGCAGGCCATGTCT  
GCCCCGATTTTCGCGTAAGGAAATCCATTATGTACTATTTAACTCGAGCG  
GCCGGCCGCCAGCACAGTGGTCGACTGTTGACAATTAATCATCGGCATAG  
TATATCGGCATAGTATAATACGACAAGGTGAGGAACTAAACCATGGCCAA  
GTTGACCAAGTGCCGTTCCGGTGCTCACCGCGCGCGACGTCGCCGGAGCGG  
TCGAGTTCTGGACCCGACCGGCTCGGGTTCTCCCGGGACTTCGTGGAGGA  
CGACTTCGCCCGGTGTGGTCCGGGACGACGTGACTCTGTTTCATCAGCGCG  
GTCCAGGACCAGGTGGTGCCGGACAACACCCTGGCCTGGGTGTGGGTGCG  
CGGCCTGGACGAGCTGTACGCCGAGTGGTCGGAGGTCGTGTCCACGAACT  
TCCGGGACGCCTCCGGGGCCGGCCATGACCGAGATCGGCGAGCAGCCGTGG  
GGGCGGGAGTTCGCCCTGCGCGACCCGGCCGCAACTGCGTGCACTTCGT  
GGCCGAGGAGCAGGACTGAACGCGTCCCGTAGAAAAGATCAAAGGATCTT  
CTTGAGATCCTTTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAA  
CCACCGCTACCAGCGGTGTTTTGTTTGCCGGATCAAGAGCTACCAACTCT  
TTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATACTGTTC  
TTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCG  
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CGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATA  
AGGCGCAGCGGTTCGGGCTGAACGGGGGGTTCGTGCACACAGCCCAGCTTG  
GAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGAGA  
AAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCG  
GCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCC  
TGGTATCTTTATAGTCCTGTCGGGTTTCGCCACCTCTGACTTGAGCGTCG  
ATTTTTGTGATGCTCGTCAGGGGGGCGGAGCCTATGGAAAAACGCCAGCA  
ACGCGGCCTTTTTACGGTTCCTGGCCTTTTGCTGGCCTTTTGCTCACATA  
TCGATTAGTCCAATTTGTAAAGACAGGATATCAGTGGTCCAGGCTCTAG  
TTTTGACTCAACAATATCACCAGCTGAAGCCTATAGAGTACGAGCCATAG  
ATAAAATAAAAGATTTTATTTAGTCTCCAGAAAAAGGGGGG

Figure 2

TCGGT "CCCGG" 101501

```

      .      20      .      40      .      60      .      80
1  AAGGGCCCGGGCCAGACTGTTACCACTCCCTTAAGTTTGACCTTAGGTCACTGGAAAGATGTCGAGCGGATCGCTCACAA 80
  |||
1  ATGGGGCCCGGGCCAGACTGTTACCACTCCCTTAAGTTTGACCTTAGGTCACTGGAAAGATGTCGAGCGGATCGCTCACAA 80
      .      20      .      40      .      60      .      80
      .      100     .      120     .      140     .      160
81 CCAGTCGGTAGATGTCAAGAAGAGACGTTGGGTACCTTCTGCTCTGCAGAATGGCCAACCTTTAACGTCGGATGGCCGC 160
  |||
81 CCAGTCGGTAGATGTCAAGAAGAGACGTTGGGTACCTTCTGCTCTGCAGAATGGCCAACCTTTAACGTCGGATGGCCGC 160
      .      100     .      120     .      140     .      160
      .      180     .      200     .      220     .      240
161 GAGACGGCACCTTTAACCAGAGACCTCATCACCCAGGTTAAGATCAAGGTCTTTTCACCTGGCCCGCATGGACACCCAGAC 240
  |||
161 GAGACGGCACCTTTAACCAGAGACCTCATCACCCAGGTTAAGATCAAGGTCTTTTCACCTGGCCCGCATGGACACCCAGAC 240
      .      180     .      200     .      220     .      240
      .      260     .      280     .      300     .      320
241 CAGGTCCCTTACATCGTGACCTGGGAAGCCTTGGCTTTTGACCCCTCCCTGGGTCAAGCCCTTTGTACACCCCTAAGCC 320
  |||
241 CAGGTCCCTTACATCGTGACCTGGGAAGCCTTGGCTTTTGACCCCTCCCTGGGTCAAGCCCTTTGTACACCCCTAAGCC 320
      .      260     .      280     .      300     .      320
      .      340     .      360     .      380     .      400
321 TCCGCCTCCTCTCTCTCCATCCGCCCCGTCTCTCCCCCTTGAACCTCCTCGTTTCGACCCCGCCTCGATCCTCCCTTTATC 400
  |||
321 TCCGCCTCCTCTCTCTCCATCCGCCCCGTCTCTCCCCCTTGAACCTCCTCGTTTCGACCCCGCCTCGATCCTCCCTTTATC 400
      .      340     .      360     .      380     .      400
      .      420     .      440     .      460     .      480
401 CAGCCCTCACTCCTTCTCTAGGCGCCCCCATATGGCCATATGAGATCTTATATGGGGCACCCCGCCCCCTTGTAACCTTC 480
  |||
401 CAGCCCTCACTCCTTCTCTAGGCGCCCCCATATGGCCATATGAGATCTTATATGGGGCACCCCGCCCCCTTGTAACCTTC 480
      .      420     .      440     .      460     .      480
      .      500     .      520     .      540     .      560
481 CCTGACCTGACAAGACAAGAGTTACTAACAGCCCTCTCTCCAAGCTCACTTACAGGCTCTCTACTTAGTCCAGCACGA 560
  |||
481 CCTGACCTGACATGACAAGAGTTACTAACAGCCCTCTCTCCAAGCTCACTTACAGGCTCTCTACTTAGTCCAGCACGA 560
      .      500     .      520     .      540     .      560
      .      580     .      600     .      620     .      640
561 AGTCTGGAGACCTCTGGCGGCAGCCTACCAAGAACAACCTGGACCGACCGGTGGTACCTCACCCCTTACCGAGTCGGCGACA 640
  |||
561 AGTCTGGAGACCTCTGGCGGCAGCCTACCAAGAACAACCTGGACCGACCGGTGGTACCTCACCCCTTACCGAGTCGGCGACA 640
      .      580     .      600     .      620     .      640
      .      660     .      680     .      700     .      720
641 CAGTGTGGGTCCGCCGACACCAGACTAAGAACCTAGAACCTCGCTGGAAAGGACCTTACACAGTCCTGCTGACCACCCCC 720
  |||
641 CAGTGTGGGTCCGCCGACACCAGACTAAGAACCTAGAACCTCGCTGGAAAGGACCTTACACAGTCCTGCTGACCACCCCC 720
      .      660     .      680     .      700     .      720
      .      740     .      760     .      780     .      800
721 ACCGCCCTCAAAGTAGACGGCATCGCAGCTTGGATACACGCCGCCACGTGAAGGCTGCCGACCCCGGGGGTGGACCATC 800
  |||
721 ACCGCCCTCAAAGTAGACGGCATCGCAGCTTGGATACACGCCGCCACGTGAAGGCTGCCGACCCCGGGGGTGGACCATC 800
      .      740     .      760     .      780     .      800
      .      820
801 CTCTAGACTGCCGGATCCCAGTGTGG (SEQ ID NO: 2) 826
  |||
801 CTCTAGACTGCCGGATCCCAGTGTGG (SEQ ID NO: 1) 826
      .      820

```

% Identity = 99.8 (824/826)

Figure 3

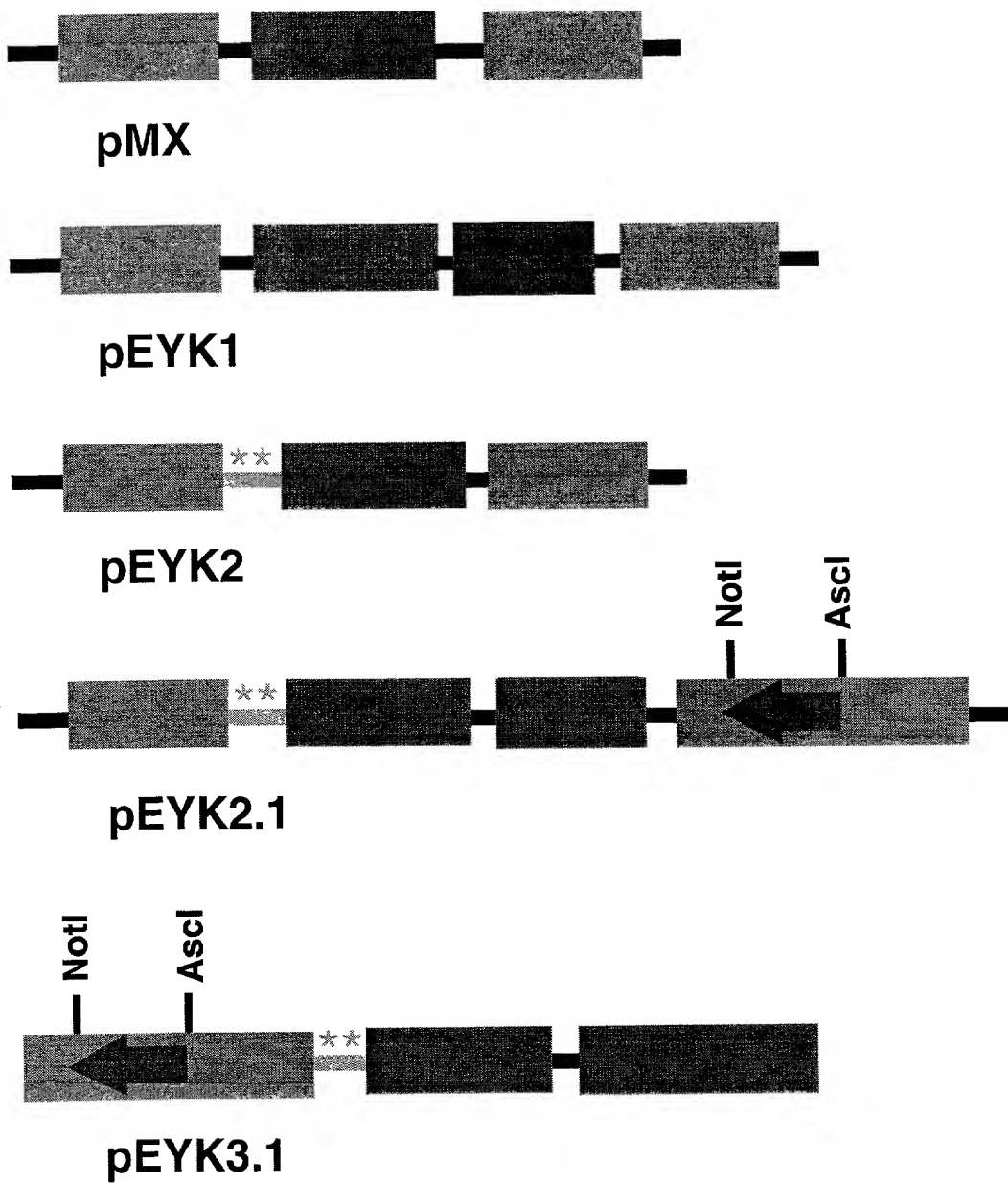
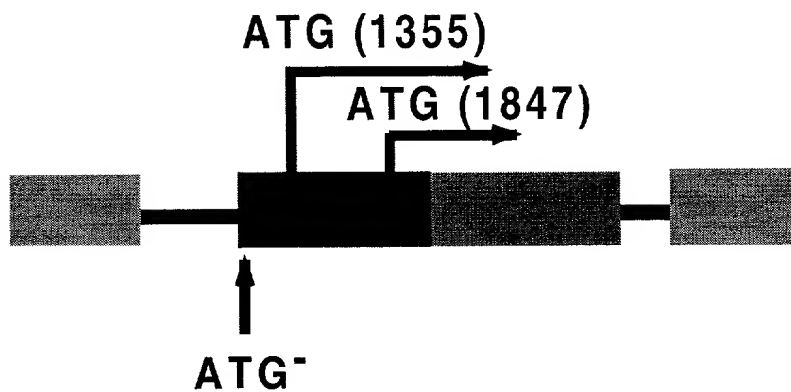


Figure 4

A)

pMX



B)

pEYK2

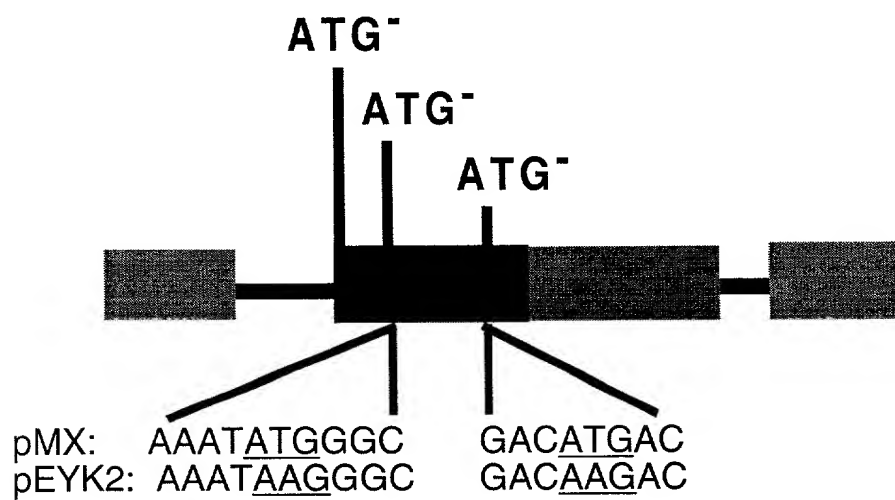


Figure 5



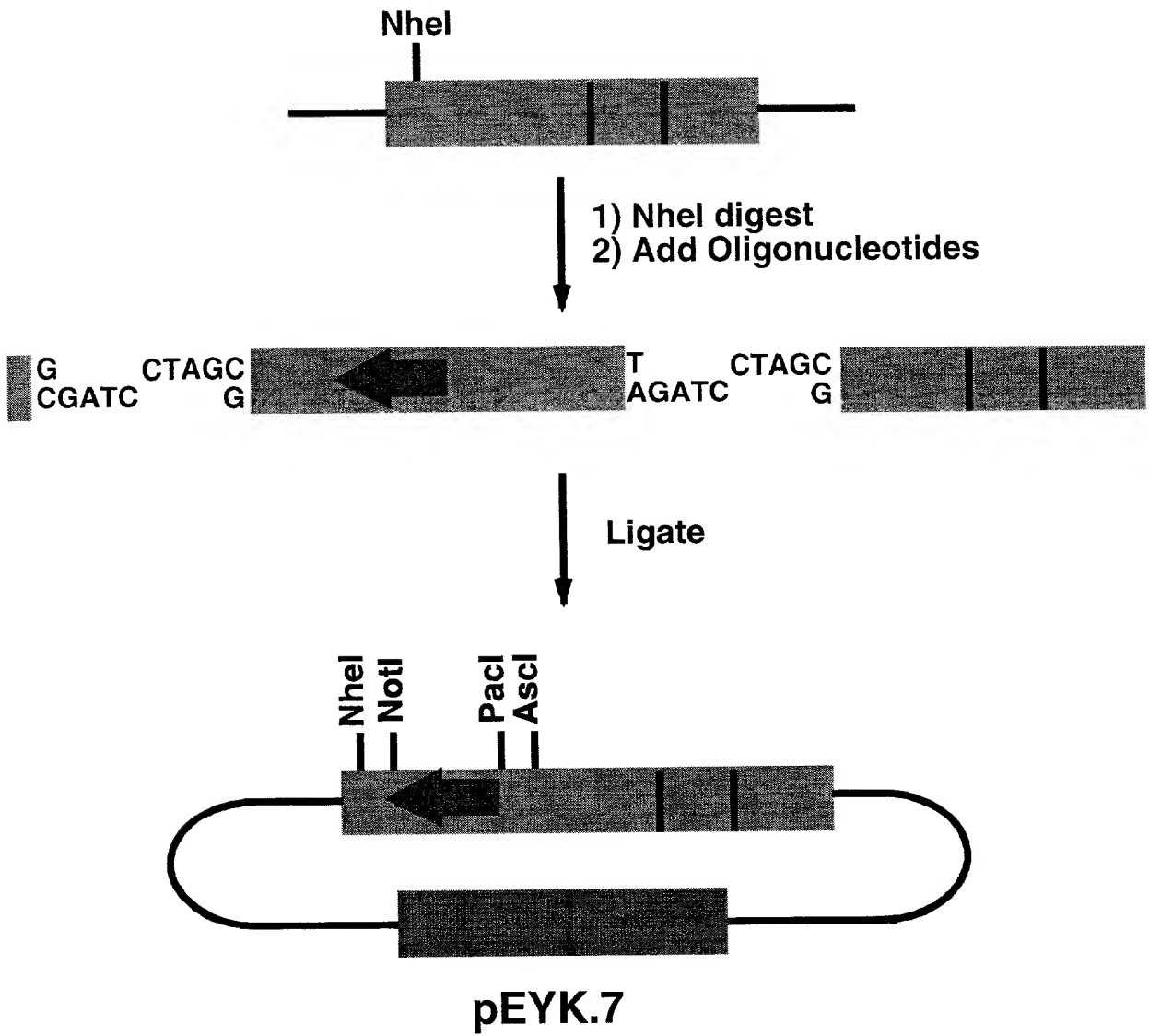


Figure 6

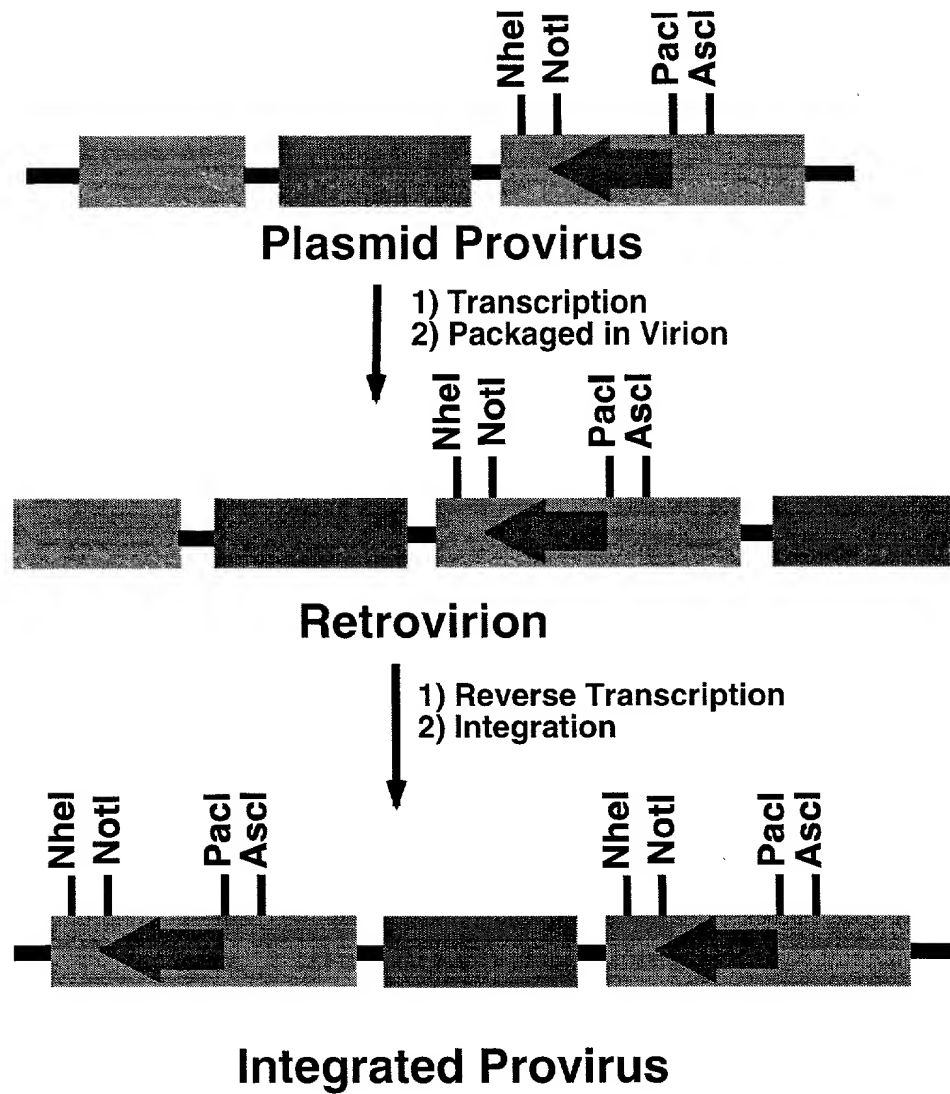


Figure 7

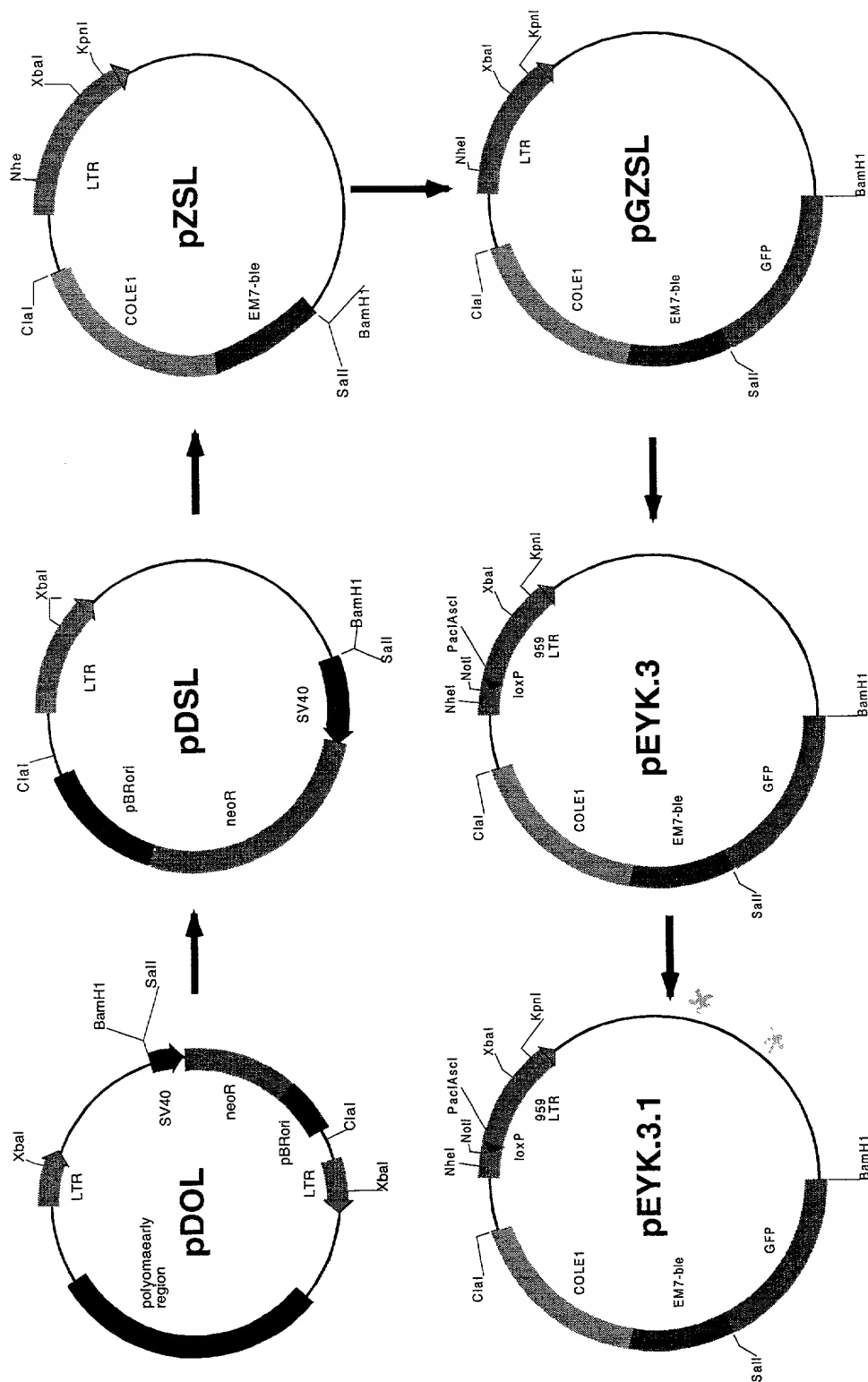
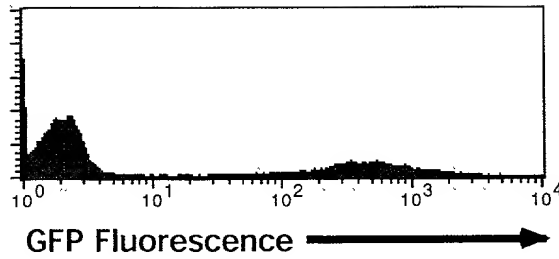


Figure 8



**pEYK.2.2**

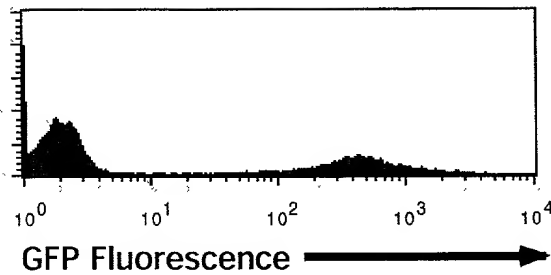


Titer:  $7.2 \times 10^6$  IFU / mL

Fold expression: 206



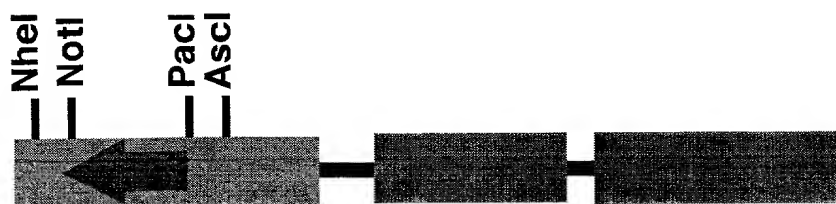
**pEYK.2.3**



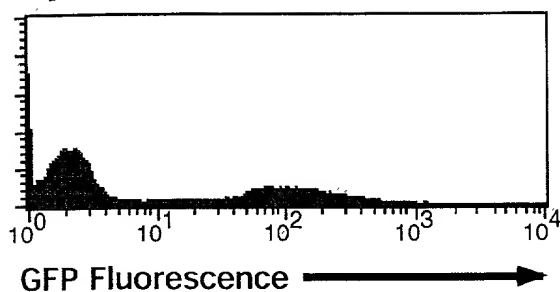
Titer:  $7.0 \times 10^6$  IFU / mL

Fold expression: 203

*Figure 9*

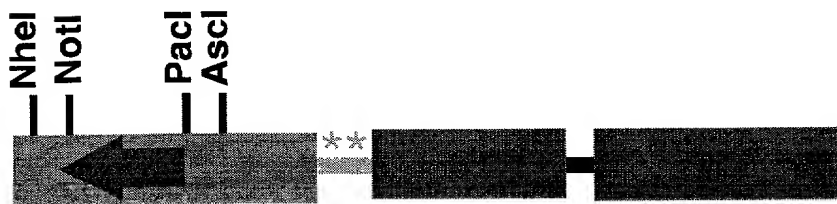


**pEYK3**

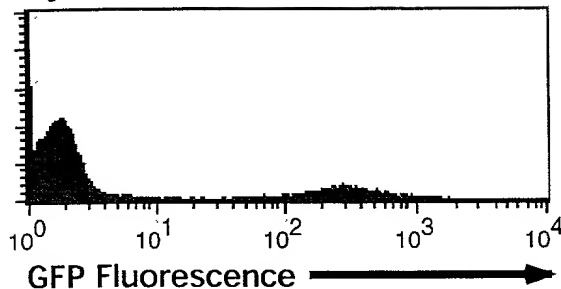


Titer:  $1.0 \times 10^6$  IFU / mL

Fold expression: 33



**pEYK3.1**



Titer:  $1.0 \times 10^6$  IFU / mL

Fold expression: 121

*Figure 10*

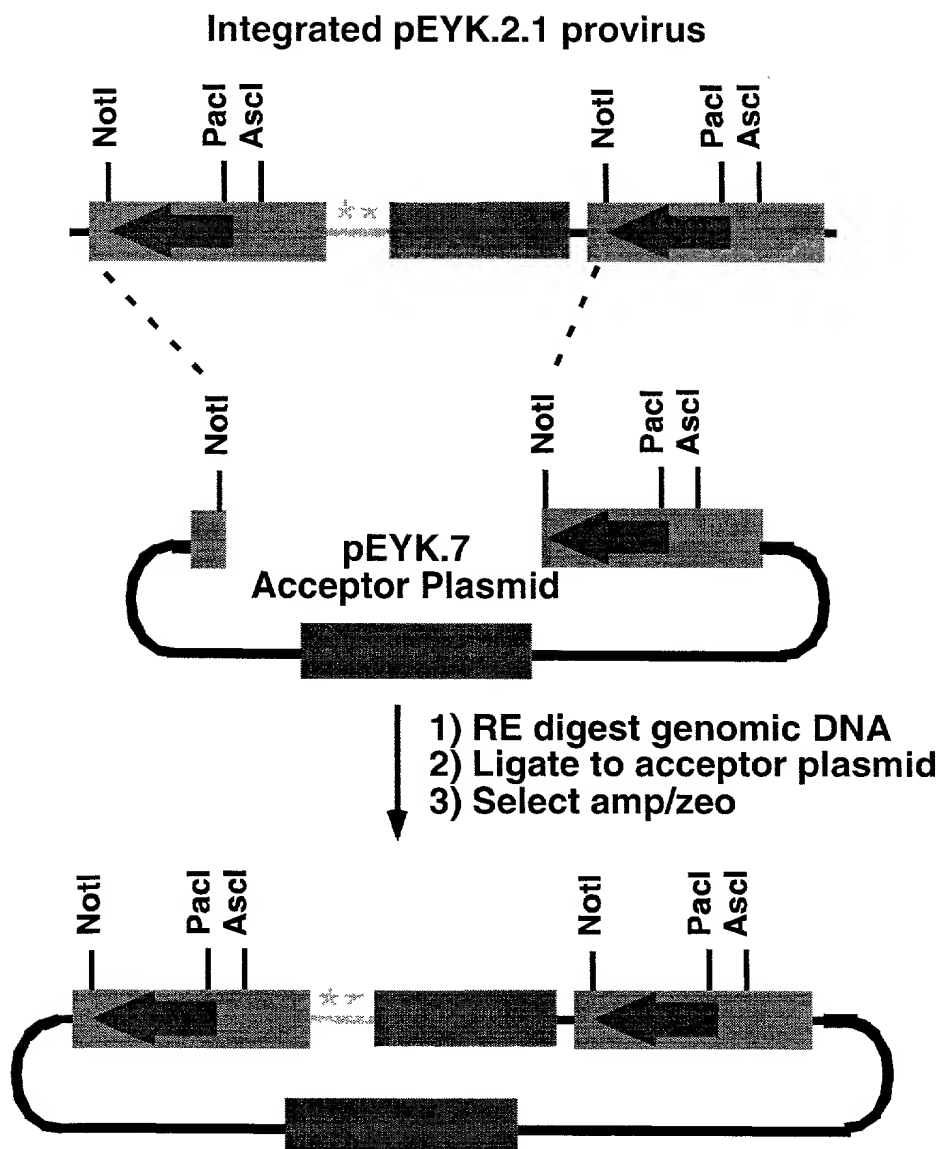


Figure 11

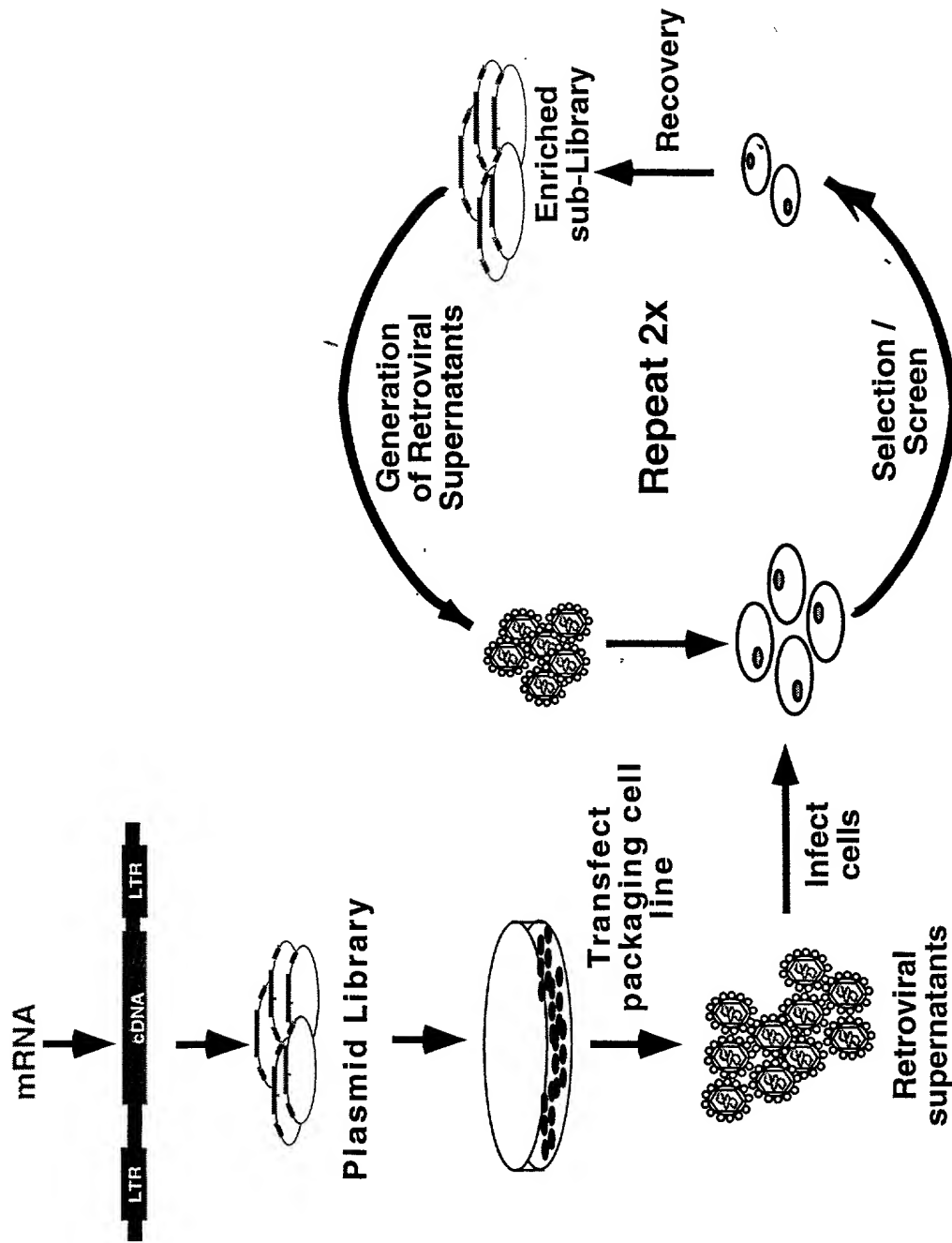
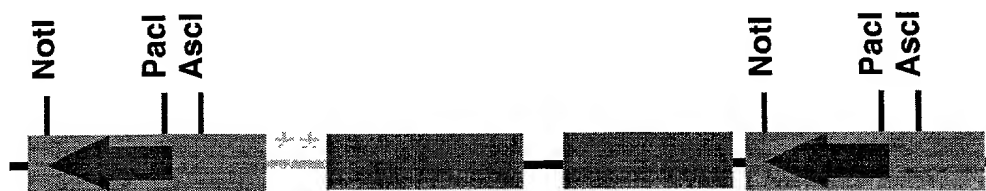


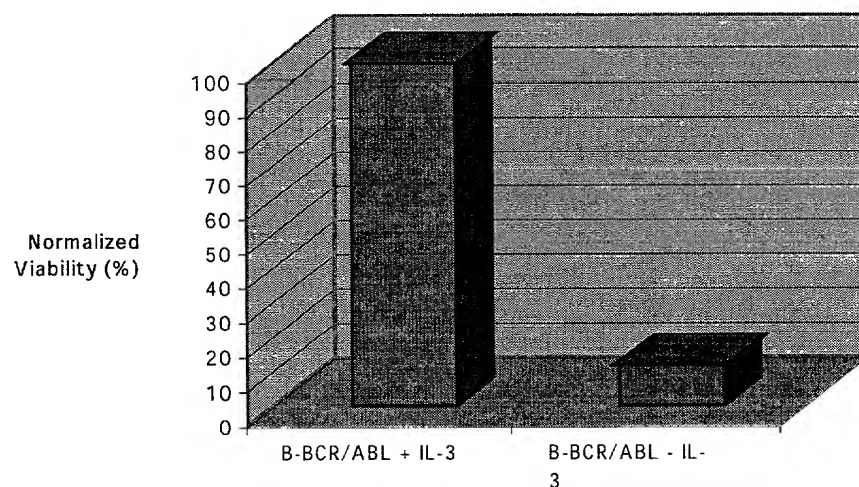
Figure 12

**A) Integrated B/A-pEYK.3.1 provirus**



**B)**

**Reversion Analysis**



*Figure 13*